Using Labor Market Information to Understand Your Local Economy

A Wisconsin Cookbook

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Northern EDGE is a demonstration project that contributes to building foundations for local job growth and business development in 29 targeted counties in northern Wisconsin. This demonstration project focuses on building capacity, creating economic and workforce resources, and stimulating business and industry activity.

WEDI is a 501(c)(3) not-for-profit foundation formed to conduct research and education to increase the effectiveness of economic development efforts.

The Wisconsin Department of Workforce Development (DWD) is the state agency charged with building and strengthening Wisconsin's workforce. As part of that goal, the Bureau of Workforce Information oversees the collection and production of state and local data sets on wages and employment by industry and occupation.

The idea for a labor market information (LMI) "cookbook" originated with the **Employment Statistics Guidance Team** (ESGT), a workgroup of economic developers, labor market information experts, and workforce developers. Since November 1999, the ESGT has been working to make Wisconsin's labor market data more useful for economic development purposes.

A subgroup of this team was formed to guide the development of the "cookbook." Subgroup members include Sandra Breitborde, Sue Gleason, Francine Horton, Terry Ludeman, Amy Phillips, and Linda Schultz (DWD); Michael Gay (City of Madison); Karna Hanna (Sauk County Development Corporation and Wisconsin Economic Development Association [WEDA]); Kathy Heady (Department of Commerce and WEDA); and Roger Nacker (Wisconsin Economic Development Institute, Inc. and WEDA). The report was written by Jessica Athens with the assistance of Roger Nacker.

This publication is available through the Wisconsin Department of Workforce Development and the University of Wisconsin–Extension's Center for Community Economic Development. For paper copies, Contact Carol Krause at (608) 267-2393 or via email at carol.krause@dwd.state.wi.us. The publication can also be downloaded as a PDF file from DWD's WORKnet Web site, http://worknet.wisconsin.gov/worknet/, or from the UW–Extension CCED Web site, http://www.uwex.edu/ces/cced/.

This document is presented as a guide to assist in the performance of economic development analysis in Wisconsin using labor market information. The views and opinions expressed in this report are those of the authors and not necessarily those of the reviewers or funding organizations.

Using Labor Market Information to Understand Your Local Economy

Table of Contents

Introduction

A survey performed by the University of Minnesota's Hubert H. Humphrey School of Public Affairs showed that many local government officials, policy makers, and economic developers feel frustrated about how to find and interpret information necessary for labor market analysis. What data should we use to analyze our labor market, where do we find the data, and how do we make sense of it? This handbook, developed under the guidance of Wisconsin's Economic Statistics Guidance Team (ESGT), is intended to answer such questions. This handbook provides an overview of labor market analysis, a list of prepared labor market reports for Wisconsin and its communities, and ends with a "cookbook," or a guide for performing your own labor market analysis. A glossary of commonly used labor market terms and an appendix of data source descriptions, uses, and limitations are also included.

Intended Audience

Though parts of this guide may prove useful to experienced economic developers, the intended audience is individuals who need to analyze labor market information for decision-making purposes, but do not have the background to undertake analysis without guidance or assistance. Such an audience may be comprised of:

Businesses
Chambers of Commerce
City Planners
Developers
Education Administrators
Local Government Officials
Job Seekers
Wisconsin Job Centers

The cookbook section of this guide will take users through the compilation and analysis of descriptive statistics on their local labor market; resources for more advanced analysis will be included at the end of the cookbook.

One Caveat…

Though we have made the best efforts to ensure that Web links, contact names and information are up-to-date, online information is dynamic, fluctuating almost daily. At the time of this guide's writing, Wisconsin's Department of Workforce Development Web site was under revision; other online sources are also subject to change.

What Is Labor Market Analysis?

Labor market analysis is how one measures and assesses the economic forces that impact the employment process. There are many variables affecting the labor market: population growth and characteristics, industrial structure and development, new technologies, changes in consumer demand, unionization and trade disputes, recruitment practices, wage levels and

conditions of employment, and training opportunities. Done correctly, labor market analysis can address a variety of questions, such as:

What are local employment conditions?

What parts of the local economy have been growing?

What industries have been declining?

How does the local economy compare to similar communities, the state, and the nation?

What are the factors leading to local employment and wage growth?

How do we identify new opportunities for economic development?

The answers to these questions can assist developers and policy makers identify industries to support or grow, help job seekers target growing occupations and industries and, ultimately, create a picture of future strengths and weaknesses in the labor market. The basic data needed to answer these questions are demographic information, including population trends and projections; unemployment statistics, current and historic; employment statistics by industry; payroll and wages by place of work; and industry profiles and projections.

Before You Begin

Labor market analysis can be overwhelming, especially if you don't know where to start. Before you jump to the "cookbook" section of this guide, you may want to take a look at the existing reports on labor markets in Wisconsin. Wisconsin's Departments of Workforce Development and Commerce, the University of Wisconsin–Extension, and the U.S. Census Bureau all produce a variety of labor market reports to provide job seekers, developers, and businesses with a better understanding of their local economic conditions. These reports may answer your labor market questions, or they may help refine the questions you wish to address. Either way, the following resources deserve a look before embarking on your own analysis.

Existing Labor Market Reports

Wisconsin Department of Workforce Development

The Wisconsin Department of Workforce Development (DWD) produces several series of reports on local labor markets throughout Wisconsin, including *Wisconsin County Workforce Profiles, Workforce Development Area Profiles,* County Labor Supply Area Estimates, and *Workforce Observations*. All of these reports are available on DWD's "Office of Economic Advisors" Web page at http://dwd.wisconsin.gov/oea/default.htm.

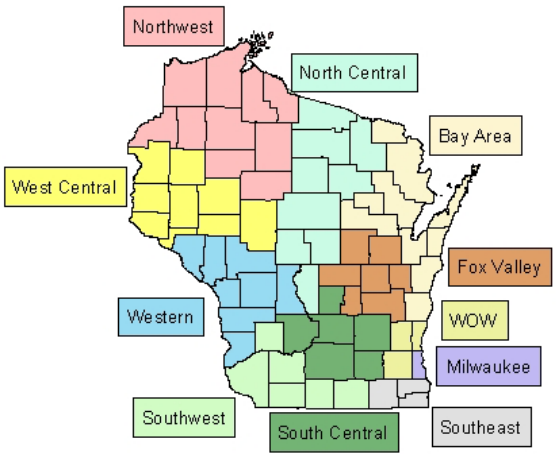
County Workforce Profiles of Wisconsin

Since 1997, *County Workforce Profiles* have been produced on an annual basis for all 72 counties in Wisconsin. Developed by labor market analysts and economists, these nine-page profiles provide a snapshot of each county's economy, including descriptions of the labor force and industry base. The authors also use historical trends to make 20-year projections for population, labor force participation, and occupational and industry data. Tables, charts, and graphs accompany these analyses to illustrate historical and projected labor market trends. These labor market reports are available as PDF files on DWD's Web site http://dwd.wisconsin.gov/oea/cp_pdf/cp_mainx.htm.

Workforce Development Area Profiles

Workforce development areas (WDAs) in Wisconsin are administrative units composed of multiple counties. Each WDA has a labor market analyst/economist who monitors economic developments within those counties and serves as a resource for the region's labor market information. The "Workforce Development Area" page on the DWD Web site, http://dwd.wisconsin.gov/oea/wda_map.htm, offer brief overviews of each region, as well as links to full profiles in PDF format. The *Workforce Development Area Profiles* supply much the same information as *County Workforce Profiles*, but for a larger region. Table 1.1 outlines data sources used in *County Workforce Profiles* and *Workforce Development Area Profiles*. While these profiles provide easily accessible, well-organized presentations of labor market conditions, some data sources may lag by one to two years.

Image 1.1

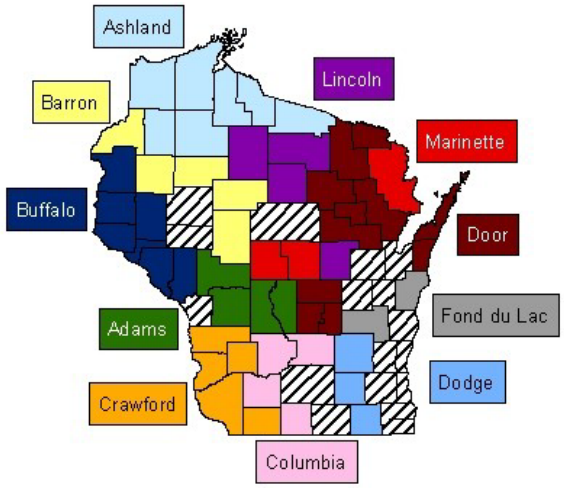


Wisconsin's Workforce Development Areas

County Labor Supply Area Estimates

Because of Wisconsin's highly rural character, many counties are not incorporated into metropolitan statistical areas (MSAs).* These non-MSA counties are divided into 11 county labor supply areas, which are distinct from workforce development areas, based on similarities among counties, including county-to-state wage ratios, employment by industry within counties, and other connections between counties, such as commuting patterns, transportation infrastructure, and location. The state's current non-MSA regions are Adams, Ashland, Barron, Buffalo, Columbia, Crawford, Dodge, Door, Fond du Lac, Lincoln, and Marinette (see Image 1.2).

Image 1.2



Wisconsin's County Labor Supply Areas

County Labor Supply Area Estimates were developed to provide wage and employment estimates at the regional level for these non-MSA counties. Wage data for these 11 regions are based on Occupational Employment Statistics survey (OES) results. County Labor Supply Area Estimates report mean and median wage rates, and wage rates at the 25th and 75th percentiles for each region. These estimates, found at http://dwd.wisconsin.gov/oea/laborshed.htm, also report each region's average wage across occupations and wages by Standard Occupation Codes (SOCs). Please note that the data are estimates that are not sanctioned by the U.S. Department of Labor.

Table 1.1: Data Sources for County Workforce Profiles and Workforce Development Area Profiles

Data Source	Use
Bureau of Economic Analysis	Per Capita Personal Income Components of Personal Income
U.S. Census Bureau	County Education Profiles Labor Force Participation Rates County Commuting Patterns
Wisconsin Department of Administration	Population information (migration, net increase, and projections)

*Metropolitan Statistical Areas (MSAs): The general concept of an MSA is one of a large population surrounded by adjacent communities that have a high degree of economic and social integration with the large population center. MSAs are defined by the Office of Management and Budget. Because of Wisconsin's highly rural character, many areas of the state are not incorporated into an MSA. As of January 2003, Wisconsin has 12 MSAs: Appleton, Eau Claire, Green Bay, Fond du Lac, Janesville, La Crosse (WI, MN), Madison, Milwaukee-Waukesha-West Allis, Minneapolis-St. Paul-Bloomington (MN, WI), Oshkosh-Neenah, Racine, Sheboygan, and Wausau. These MSA designations will be in use beginning in 2005.

Table 1.1 continued

Data Source	Use
Quarterly Census of Employment and Wages (QCEW, also known as ES-202)	Average Annual Wage by Industry Employment and Wage Distribution by Industry Top 10 Industries/Employers
Current Employment Statistics Program (CES)	Industry Employment and Distribution
Local Area Unemployment Statistics (LAUS)	Unemployment, current and historic
Occupation Employment Statistics Survey (OES)	Occupation Growth Job Openings Wages Minimum Training Requirements

See Table 1.2 for details on data availability by geographic region

Wisconsin Plant Closing and Mass Layoff Notices

The Department of Workforce Development maintains records of all mass layoffs and plant closings in the state of Wisconsin. Notices include company name, address, industry, type of notice (layoff or closing), and number of workers affected. The Web page http://dwd.wisconsin.gov/lmi/plant_close_current.htm posts most recent layoffs and closings, as well as downloadable files of historic data. Files for download are in either Excel or PRN format.

Wisconsin Projections, 2001–2003 and 2000–2010

Projections for employment by industry and occupation in Wisconsin can be found at the following links as PDF files: http://dwd.wisconsin.gov/lmi/pdf/stproj_summary01_03.pdf (2001–03) and http://dwd.wisconsin.gov/dwd/publications/oea/OEA-9009-P.pdf (2000–10).

Workforce Observations

For labor market information updates throughout the year, DWD's Labor Market Information Group produces monthly *Workforce Observations*—a series of news release summaries for Workforce Development Areas (WDAs). These updates can be found online at http://dwd.wisconsin.gov/oea/wda/wo_pubs.htm.

WORKnet

WORKnet is an online, interactive tool from DWD to assist job seekers and data analysts in accessing the labor market information they need. This interactive Web site is available at http://worknet.wisconsin.gov/worknet/.

Job Seeker tools. With WORKnet's Job Seeker tools, users can access workforce profiles for each county, search occupations by city or county, or search for employers by city or county.

Employer Search results display employer names, addresses, contact information, related industry, and employment size. The site also links to maps of employer locations via MapQuest®.

The County Summaries offered by WORKnet include top employers and top industries by employment, top paying hourly occupations, unemployment rates (delayed by two months),

population for the county, state, and the United States, and data on average home cost, per capita income, and county schools.

The Occupation Search allows users to choose an occupation from either a comprehensive list, a list of non-traditional jobs for women, or by keyword search. Users can then choose their occupation of interest from a list of occupational categories. Occupational profiles give an occupation description and hourly and annual wage levels (for entry level, experienced, and average rates). This wage data is given for the metropolitan statistical area and for the state overall. Additional information includes short and long term projections for job openings and percent change in job openings over time. Links to employment search engines on the Internet, including Wisconsin's JobNet, can be found at the bottom of the page.

Data Analyst tools. Data Analyst tools are geared toward economic developers, labor market analysts, and any user whose objectives are more data-driven. See Table 1.2 for available data tables, federal programs, or topics. The geographic areas for which they are available are also shown.

Table 1.2: Geographic Availability for WORKnet Data Tools

Data Type	**Geographic Availability**					
	United States	State	County	MSA	Balance of State	Selected Cities
Quarterly Census of Employment and Wages (QCEW)	No	Yes	Yes	No	No	No
Current Employment Statistics (CES)	No	Yes	No	Yes	No	No
Local Area Unemployment Statistics (LAUS)	Yes	Yes	Yes	Yes	No	Yes
Occupational Employment Statistics (OES)	No	Yes	No	Yes	Yes	No
Strikes and Lockouts	No	No	Yes	No	No	Yes
Industry Projections	No	Yes	No	No	No	No
Occupation Projections	No	Yes	No	No	No	No
Projections Matrix	No	Yes	No	No	No	No
Commuting Patterns	Available for county to county within Wisconsin, and state to county, county to state for out-of-state commutes.					
County Wages and Employment by Occupation	No	No	Yes	No	No	No
Total and Per Capita Personal Income	No	No	Yes	No	No	No
Population	Yes	Yes	Yes	Yes	No	No
Median Home Sales Price	No	No	Yes	No	No	No

Source: WORKnet data menu, http://worknet.wisconsin.gov/worknet/datablelist.aspx?menuselection=da

To access data tables, click on "Data Tables" under the Data Analyst menu on the left-hand side of the screen. A list of data tables will load and users will have the option to query data sets or to download entire data tables. Query fields vary by data set, but generally users can query by

year and geographic location. After querying the data, they can download their specified data set. For both full and queried data tables, data downloads are formatted as comma-separated value (CSV) files. Visit the Bureau of Economic Analysis (BEA) Web site at http://www.bea.gov/bea/regional/docs/import_tips.cfm for tips on downloading CSV files.

Economic Developer tools. The Economic Developer tools available on WORKnet include Local Employment Dynamics (LED) data, a Large Employer Search for the state of Wisconsin, County Summaries (see Job Seeker tools for more information), Frequently Asked Questions about labor market analysis, and a Resources page with a glossary and acronyms list.

Local Employment Dynamics (LED) provides what is referred to as Quality Workforce Indicators (QWI). The LED QWI series provides regularly updated information about where workers and clients are, what industries are hiring workers, what workers get paid, and more.

LED data is available based on both the Standard Industrial Classification (SIC) and the North American Industrial Classification System (NAICS) industry coding systems. Geographies that can be queried are counties, MSAs, and Workforce Information Boards (WIB).

The Large Employer Search is presented to give an understanding of the types and sizes of companies and industries that employ workers. You can choose to view ownerships of private businesses, government businesses, or both in quantities of 25, 50, 100, 200 or all. The definition for large employers is businesses with 1,000 or more employees. Selecting the search parameter "All" will display the entire list of employers with 1,000 or more employees.

The Frequently Asked Questions listed under the Economic Developer tools address questions basic to economic development, such as: What are the employment conditions in our community? What is the workforce growth potential in our labor market area? What are the factors leading to local employment and wage growth for economic prosperity?

Finally, the Resources page links to a glossary of common terms and acronyms, a list of useful Internet links organized by program area or topic, descriptions of federal-state cooperative programs, department-created publications, and additional links to other DWD resources.

Wisconsin Department of Commerce

County Economic Profiles

Wisconsin's Department of Commerce provides *County Economic Profiles* similar to DWD's *County Workforce Profiles*. These ten-page profiles, available in PDF format at http://www.commerce.state.wi.us/MT/MT-COM-4300.html#County%20Economic%20Profiles, provide information on population characteristics (including vital statistics such as births, deaths, and marriages) income, housing, banking, and government finance. They also identify each county's key manufacturing and service industries, employment and income by industry, as well as data on farming and natural resources. Though these profiles provide only a brief analysis of a county's economy, they do come with detailed bibliographies of the diverse data sources used in the profile.

University of Wisconsin–Extension

The University of Wisconsin–Extension's Center for Community Economic Development (CCED) provides links to a wide variety of reports on its "County Economic Profiles" Web

page, http://www.uwex.edu/ces/cced/CountyEconomicProfile.htm. See **Other Special Reports,** below, for descriptions of these profiles.

Standard Profiles, Wisconsin Food Security Project

The University of Wisconsin–Extension produces profiles on hunger and food insecurity in Wisconsin counties that provide information on employment, poverty, housing, and federal nutrition assistance programs. These profiles are available online at http://www.uwex.edu/ces/flp/cfs/standard.cfm.

U.S. Census Bureau

American FactFinder

Factsheets. Web users can search for a community by zip code, city, or state. Factsheets provide standardized tables of information on population, race, household size, educational status, and number of married, disabled, and foreign-born residents. FactFinder also provides data on economic indicators such as labor force participation, median household income, per capita income, and families and individuals below the poverty level. Information on housing—another economic indicator—includes number of single-family homes, median home value, and percent of homes mortgaged. Data presented in Factsheets come from the two most recent decennial Censuses, the Economic Census (Economic Censuses are performed every five years, in years ending in "2" and "7"), and yearly American Community Survey and Population Estimates.

Data sets. For researchers needing specific, detailed data sets, FactFinder also allows individual searches on population characteristics, housing information, and business and government data. The site, located at http://factfinder.census.gov/home/saff/main.html?_lang=en, is ideal for a quick snapshot of a region, as well as a quality resource for virtually all data available through the Census Bureau.

Other Special Reports

Though the following reports are external to the University of Wisconsin–Extension, they are all available through the UW–Extension's CCED Web page http://www.uwex.edu/ces/cced/CountyEconomicProfile.htm.

2002 County Economic Profiles, Wisconsin Department of Tourism

These one-page snapshots detail a county's ranking for traveler spending, estimated traveler spending per year and the number of full-time equivalent jobs (with total income) supported by tourism. The profiles also show local and state revenues resulting from tourism, and increases in tourist spending over a ten-year period. These profiles can be found online at http://agency.travelwisconsin.com/Research/EconomicImpact_Active/02countyprofiles.shtm. The figures highlighted in these profiles come from *The Economic Impact of Expenditures by Travelers on Wisconsin 2002*, a report commissioned by the Department of Tourism and produced by consulting group Davidson-Peterson and Associates.

BEARFACTS, U.S. Bureau of Economic Analysis

This page on the BEA Web site allows visitors to choose a state or county for a quick overview of local economic data. The fact sheets include information on per capita personal income, total personal income, components of total personal income, and earnings by place of work. Data is about two years delayed. The site can be directly accessed through http://www.bea.gov/bea/regional/bearfacts/.

County Sales and Use Tax Report, Wisconsin Department of Revenue

This report is an Excel worksheet providing information on taxable receipts by category in counties that have adopted the optional 0.5 percent sales tax. This file can be accessed at http://www.dor.state.wi.us/ra/co02main.xls.

Education Finance Statistics, National Center for Education Statistics

The National Center for Education Statistics offers statistics on individual school districts' revenues, expenditures, and characteristics such as number of pupils, pupil-teacher ratio, and percent of students at or below the poverty line. These statistics are available at http://nces.ed.gov/edfin/search/search_intro.asp.

Rural County Profiles, Wisconsin Office of Rural Health

This Web site, located at http://www.worh.org/new_orh_docs/resrc_profilesmap.asp, provides links to data on rural county hospitals, ambulance service providers, economic impact analysis of the health care industry, the Healthiest Wisconsin 2010 data package, and more.

Wisconsin County Profiles – Census 2000, UW System Market Research

These profiles, based on 2000 Census data, are eight-page reports on key demographics— including age, race, education, household income, and family and marital status— workforce characteristics, and housing attributes. They are available at http://www.uwsa.edu/budplan/market/papers/CensusData.htm.

And Finally…

If the above resources and reports don't answer your questions, you may want to consider preparing your own regional economic analysis. By doing so, you can ensure that the analysis is tailored to answer your specific labor market questions. The following "cookbook" may help you get started.

The "Cookbook": How to Prepare A Regional Economic Analysis

Introduction

A few key questions guide the collection and interpretation of labor market information for a regional economic analysis. Though the content of the analysis will be somewhat unique depending on an LMI user's goals, the following is a list of a few basic questions a regional economic analysis should address.

What does the current workforce look like?

What will the workforce look like in the future?

Have citizens been able to find employment?

Where are citizens employed?

What are the most important components of the local economy?

What is the quality of residents' economic well being?

What makes the local economy "tick"?

What are the key economic development opportunities in the region?

These questions are answered by analyzing the following data:

Population (historic, current, and projections)

Unemployment and labor force participation (historic and current)

Employment by industry and company size

Top ten industries and employers

Employment projections by industry and occupation

Personal income and its components

Per capita personal income

Using this data, users should be able to identify occupational and industrial targets; recommend industries to grow, maintain, or introduce into the local economy; and recommend job-training programs.

The following section will walk you through data collection, interpretation, and suggestions for presentation. For expanded analysis of local industries, we will also introduce two analytic techniques—location quotients and shift-share analysis. These two measurements provide descriptive statistics on a local economy's export base, as well as the relative share an industry has in the local economy compared to the state or the nation as a whole. Though both these measures have their limitations, they are useful in determining key industries for retention and expansion.

Getting Started—Data Collection and Interpretation

This section focuses on developing a regional economic analysis for a county, because data for counties and metropolitan statistical areas (MSAs) are the most widely available. However, you can easily employ these same steps to analyze economies of customized regions. Feel free to create your own region for analysis, but bear in mind that complete data on detailed industry

break-downs may not be available for small regions (below the county level) due to data suppression intended to protect the confidentiality of individual businesses.

Step One: Population

Trends in population growth (or decline) are sometimes used as a general measure of economic performance; that is, areas with rapidly growing populations typically have strong job growth. More importantly, looking at population estimates and projections will answer two key questions: What does the current workforce look like? What will the workforce look like in the future? By looking at local population growth over time, compared to state or national population benchmarks, you can gain an understanding of how your local workforce is changing relative to the state or the nation.

Table 2.1: Data for Population

Data	Regions	Where do I find it?
Population trends by decade (ex: 1960–2000)	County, MSA, or customized region and state	U.S. Census Bureau, http://www.census.gov/population/www/censusdata/hiscendata.html Wisconsin Department of Administration, Demographic Services Center home page, http://www.doa.state.wi.us/pagesubtext_detail.asp?linksubcatid=353 The DOA's Demographic Services Center home page offers a link to WisStat, an online, interactive data source provided by the UW–Extension's Applied Population Laboratory.
Population by age and gender for the last two decennial censuses	County, MSA, or customized region and state	U.S. Census Bureau (state level only), http://www.census.gov/population/www/censusdata/hiscendata.html U.S. Census Bureau, American FactFinder (Most recent census, data down to block level), http://factfinder.census.gov/home/saff/main.html?_lang=en Wisconsin Department of Administration, Demographic Services Center home page, http://www.doa.state.wi.us/pagesubtext_detail.asp?linksubcatid=353
Current population estimates by age and gender	County, MSA, or customized region and state	U.S. Census Bureau (state level only) http://eire.census.gov/popest/estimates.php Wisconsin Department of Administration, Demographic Services Center home page (county, MSA, and state) http://www.doa.state.wi.us/pagesubtext_detail.asp?linksubcatid=353
Population projections	County, MSA, or customized region and state	U.S. Census Bureau (state level only), http://www.census.gov/population/www/projections/stproj.html Wisconsin Department of Administration, Demographic Services Center home page (county, MSA, and state), http://www.doa.state.wi.us/pagesubtext_detail.asp?linksubcatid=353
Commuting patterns	County-to-county	Wisconsin Department of Administration, Demographic Services Center home page (county, MSA, and state), http://www.doa.state.wi.us/pagesubtext_detail.asp?linksubcatid=353

Population data: Presentation. To present the population data you've gathered, the best approach is to use both tables and graphs of population changes over time. For example:

Table 2.1.1: Historic Population Counts

Historic Population Counts for Columbia County and Wisconsin

Year	Columbia County		Wisconsin	
	Number	% Change	Number	% Change
1960	36,708	—	3,951,777	—
1970	40,150	9.37	4,417,731	11.8
1980	43,222	7.65	4,705,767	6.5
1990	45,088	4.3	4,891,769	3.9
2000	52,468	16.36	5,285,604	8.1

Source: U.S. Census data, Wisconsin Department of Administration, http://www.doa.state.wi.us/pagesubtext_detail.asp?linksubcatid=353

Note : *It is a good habit to include source information for your tables and charts.*

Table 2.1.2: Population Projections

Population Projections for Columbia County and Wisconsin

Year	Columbia Cty.	Wisconsin
2005	54,434	5,563,896
2010	56,366	5,751,470
2015	58,135	5,931,386
2020	59,753	6,110,878
2025	61,669	6,274,867
2030	63,177	6,415,923

Source: Population projections, Wisconsin Department of Administration, http://www.doa.state.wi.us/pagesubtext_detail.asp?linksubcatid=353

Table 2.1.3: Columbia County Population by Age and Sex, 1990 and 2000

Columbia County Population by Age and Sex 1990 and 2000

Sex	Age Group	1990	2000	Sex	Age Group	1990	2000
MALE	0–4	1,583	1,667	FEMALE	0–4	1,593	1,551
	5–9	1,776	1,845		5–9	1,690	1,744
	10–14	1,708	2,016		10–14	1,625	1,949
	15–19	1,584	1,909		15–19	1,464	1,761
	20–24	1,327	1,379		20–24	1,163	1,125
	25–29	1,760	1,633		25–29	1,569	1,383
	30–34	1,848	1,909		30–34	1,798	1,746
	35–39	1,924	2,314		35–39	1,666	2,191
	40–44	1,623	2,340		40–44	1,523	2,155
	45–49	1,235	2,087		45–49	1,251	1,871
	50–54	1,072	1,820		50–54	1,076	1,694
	55–59	963	1,279		55–59	1,056	1,345
	60–64	1,063	1,092		60–64	1,108	1,096
	65–69	976	893		65–69	1,073	1,051
	70–74	795	847		70–74	997	992
	75–79	548	676		75–79	821	851
	80–84	347	434		80–84	621	729
	85 +	258	210		85 +	604	786
	TOTAL	22,390	26,448		TOTAL	22,698	26,020

Source: U.S. Census data, Wisconsin Department of Administration, http://www.doa.state.wi.us/pagesubtext_detail.asp?linksubcatid=353

Chart 2.1.1

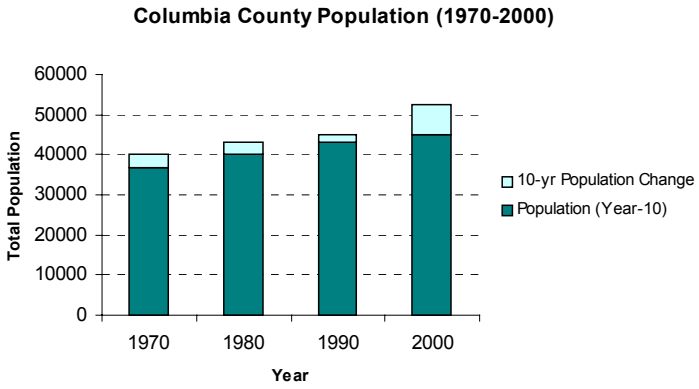


Chart 2.1.2

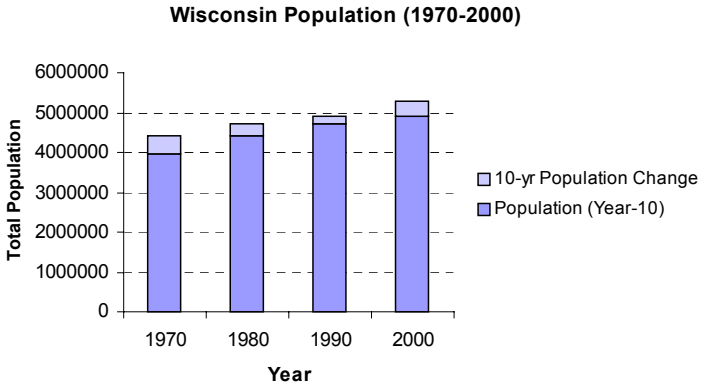
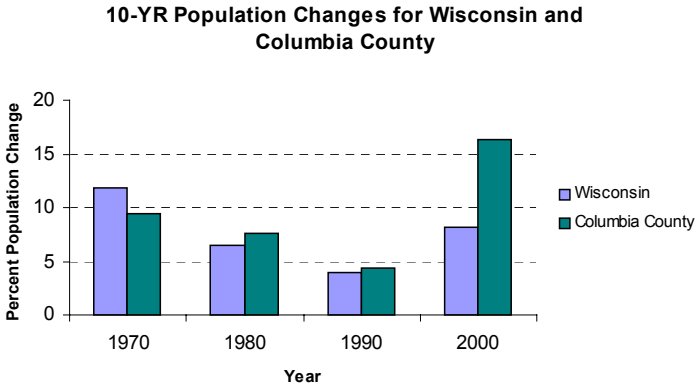


Chart 2.1.3



Source for Charts 2.1.1–2.1.3: See Table 2.1.1

Discussion. Tables 2.1.1 and 2.1.2 and Charts 2.1.1–2.1.3 depict population trends in Columbia County and Wisconsin, respectively. The final chart compares Columbia County's growth rate by decade to the state's growth.

From these charts, it is clear that Columbia County's growth lagged behind state growth between 1960 and 1970, but has since surpassed it. Between 1990 and 2000, Columbia County's population growth rate was more than twice the growth rate for the state as a whole.

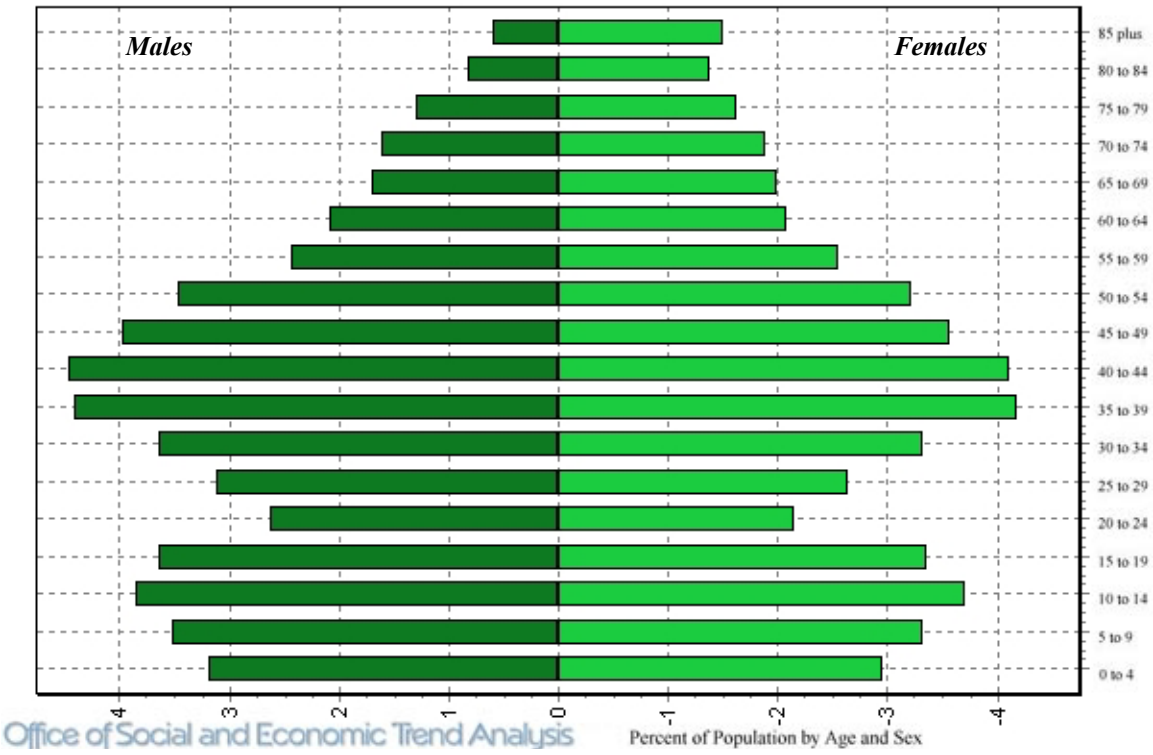
The population for Columbia County is expected to reach 63,177 by 2030; Wisconsin's projected population for 2030 is 6,415,923.

Data on commuting patterns (not shown) indicate that Columbia County is a net exporter of labor. Based on 2000 Census records, Columbia County net flow of workers is −5,750.

Population data: Additional presentation. The previous graphs and tables are the minimum needed to craft a picture of your population's past, present, and future. Information on the distribution of your population will provide a better understanding of your regional labor markets.

Population distribution refers to its breakdown by age and gender (see Table 2.1.3 for an example). A graphic commonly used to represent population by age and gender is the population pyramid (see Chart 2.1.4). You can use a population pyramid to get a sense of how many new workers you will have entering the workforce, how many are currently in the work force, and how many are near retirement.

Chart 2.1.4: Columbia County Population Pyramid, 2000



Source: Office of Social and Economic Trend Analysis Web site, http://www.seta.iastate.edu/

Discussion. For Columbia County, a large proportion of the population—roughly 24 percent—is between the ages of 30 and 49. This indicates that the workforce has a strong base of experienced workers. Unfortunately, this base of workers will decline as the 30- to 49-year-olds reach retirement age, because the current proportion of entry-level workers between the ages of 20 and 29 is comparatively low. Given the fact that Columbia County has a negative flow of workers, a low proportion of young workers suggests that the county lacks the employment opportunities needed to retain younger workers, causing them to migrate to other counties or out-of-state. Despite the fact the county is growing faster than the state overall, its inability to retain young workers could create a workforce shortage in the future.

Step Two: Unemployment and Labor Force Participation

Monthly estimates of unemployment rates for metropolitan areas (MSAs), counties, and states provide a rough measure of economic performance. The basic question answered with unemployment data is, have citizens been able to find employment? The unemployment rate is easy to calculate—divide the number of people who are jobless and seeking work by the total labor force. The following concepts are helpful in identifying the employed and unemployed:

People with jobs are **employed**.

People who are jobless, looking for jobs, and available for work are **unemployed**.

The **labor force** is comprised of all citizens who are employed or unemployed.

People who are neither employed nor looking for jobs are **not in the labor force**.

When using unemployment data (see Table 2.2 below), you will generally have the option to choose between seasonally adjusted and not seasonally adjusted data. Seasonally adjusted indicates that a data series has been statistically modified to eliminate the effect of intra-year variations, such as a rise in employment during the pre-holiday season. Rather than representing seasonal changes that occur month-to-month, seasonally adjusted data provides a better picture of actual economic change between months. Though we recommend seasonally adjusted data for analysis, it is important that the data sets you choose for unemployment are consistent.

Labor force participation rates (LFPRs) measure the number of citizens employed or looking for employment as a percentage of the civilian noninstitutional population. LFPR data help determine the factors that lead to discouraged workers, or workers that have dropped out of the labor force. Unfortunately, LFPRs are current only at the time of a decennial census. The Wisconsin Department of Workforce Development, however, uses population projections to estimate labor force participation rates between censuses for its *County Workforce Profiles.*

Table 2.2: Data Sources for Unemployment and Labor Force Participation

Data	Regions	Where do I find it?
Current unemployment rates	County, MSA, or customized region and state	Bureau of Labor Statistics, LAUS data http://stats.bls.gov/lau/home.htm Click on "State and Local Unemployment Rates" under the "Employment and Unemployment." Wisconsin Department of Workforce Development, WORKnet data tables, LAUS data http://WORKnet.wisconsin.gov/worknet/
Historic unemployment rates (past 20 years)	County, MSA, or customized region and state	Bureau of Labor Statistics, LAUS data http://stats.bls.gov/lau/home.htm Click on "State and Local Unemployment Rates" under "Employment and Unemployment." Wisconsin Department of Workforce Development, WORKnet data tables, LAUS data http://worknet.wisconsin.gov/worknet/

Table 2.2 continued

Data	Regions	Where do I find it?
Labor force participation rate	County, MSA, or customized region and state	U.S. Census Bureau, American FactFinder, "Transportation: Employment Status and Commuting to Work" module http://factfinder.census.gov/home/saff/main.html?_lang=en

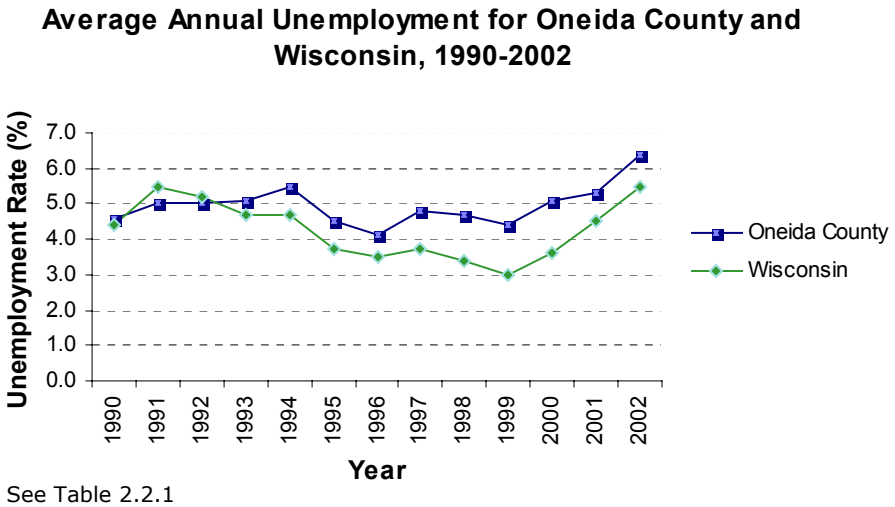
Unemployment and labor force participation data: Presentation. As with population data, the best way to present unemployment data is through tables and graphs. See below for examples.

Table 2.2.1: Average Annual Unemployment Rates for Oneida County and Wisconsin, 1990–2002

Average Annual Unemployment Rates (%), 1990–2002													
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Oneida County	4.6	5.0	5.0	5.1	5.5	4.5	4.1	4.8	4.7	4.4	5.1	5.3	6.4
WI	4.4	5.5	5.2	4.7	4.7	3.7	3.5	3.7	3.4	3.0	3.6	4.5	5.5

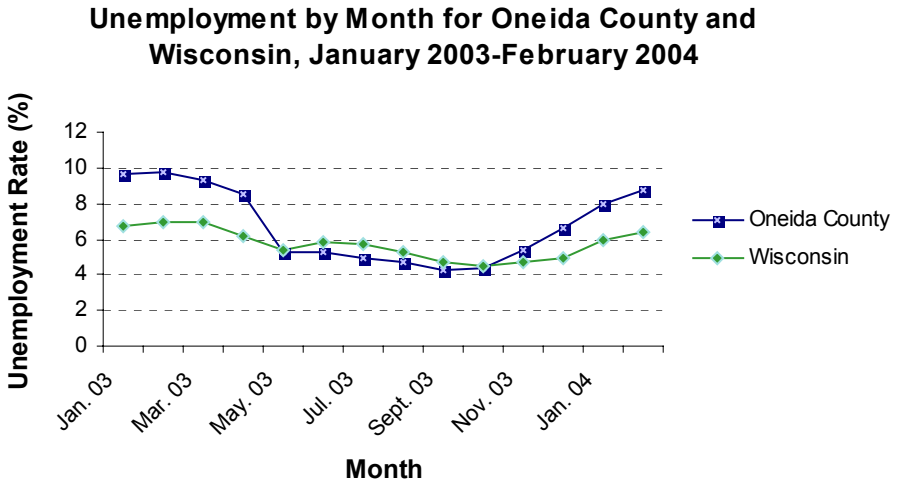
Source: Annual Local Area Unemployment Statistics (LAUS), 1990–2002, WI Dept. of Workforce Development, http://worknet.wisconsin.gov/worknet/

Graph 2.2.1



Source: See Table 2.2.1

Graph 2.2.2



Source: Monthly Local Area Unemployment Statistics (LAUS), January 2003–February 2004, WI Dept. of Workforce Development, http://worknet.wisconsin.gov/worknet/

Discussion. The table and graphs on unemployment in Oneida County show that, beginning in 1993, the unemployment rate has hovered between 0.2 and 1.5 percent above the state's unemployment rate. In general, however, the county's unemployment pattern follows that of Wisconsin. Between the months of January 2003 and April 2003, Oneida County's unemployment rate was significantly higher than Wisconsin's overall. The county's unemployment rate then dipped below the average for the state from May 2003 to October 2003. Beginning in November 2003, Oneida County's unemployment rate began to rise significantly over the state's unemployment rate. According to Census 2000 data, Outagamie County's labor force participation rate was 72.7 percent, the eighth highest labor force participation rate in the state. The average LFPR for Wisconsin as of 2000 is 69.1 percent.

Step Three: Employment

Employment data—at the MSA, county, state, or national level—is a complete measure of full- and part-time jobs, including wage and salary workers, proprietors, private household employees, and miscellaneous workers. Employment data answers the question: Where are citizens employed?

Table 2.3: Data Sources for Employment

Data	Regions	Where do I find it?
Employment by industry sector	County, MSA, or customized region and state	Bureau of Labor Statistics, QCEW data http://stats.bls.gov/cew Wisconsin Department of Workforce Development, WORKnet data tables, QCEW data http://worknet.wisconsin.gov/worknet/
Employment change by industry sector (base year and current year)	County, MSA, or customized region and state	Bureau of Labor Statistics, QCEW data http://stats.bls.gov/cew Wisconsin Department of Workforce Development, WORKnet data tables, QCEW data Http://worknet.wisconsin.gov/worknet/
Employment by type (wage and salary or proprietor)	County, MSA, or customized region	Bureau of Economic Analysis http://www.bea.doc.gov/bea/regional/data.htm Table CA05N
Employment by size of establishment	County, MSA, or customized region and state	Wisconsin Department of Workforce Development, WORKnet data tables, QCEW data http://worknet.wisconsin.gov/worknet/

Note on industry classification systems.[*] North American Industry Classification System (NAICS) is a new industry classification system that groups the economy into 20 broad sectors, an increase from the 10 divisions of the Standard Industrial Classification (SIC) system. Unlike SIC, NAICS groups business establishments by production processes. Established in 1997, NAICS emphasizes new and emerging industries, high-technology industries, and service industries. Five sectors are primarily goods producing and 15 are entirely services-producing industries. NAICS is scheduled to be updated every five years; for 2002 updates, visit http://www.census.gov/epcd/naics02/.

Many of the new sectors reflect SIC divisions, such as NAICS's Utilities and Transportation sectors, broken out from the SIC division Transportation, Communications, and Utilities. Similarly, the SIC division for Service Industries has been broken out to form several new sectors such as Professional, Scientific and Technical Services; Management, Support, Waste Management, and Remediation Services; and Education Services.

Other sectors represent combinations of industrial activity from more than one SIC division. For example, the Information sector includes major components from Transportation, Communications, and Utilities (broadcasting and telecommunications), Manufacturing (publishing), and Services Industries (software publishing, data processing, information services, and motion picture and sound recording). The Information sector also identifies new industries like cellular and other wireless telecommunications, telecommunications resellers, Web search portals, Internet service providers, and Internet publishing and broadcasting.

[*] From the Wisconsin Department of Workforce Development, http://dwd.wisconsin.gov/lmi/cew_naics.htm#Intro

The greatest impact of SIC to NAICS conversion will be on manufacturing and wholesale trade. For example, auxiliary support establishments will be classified by their primary activity. Under SIC, they were classified according to the establishment they served. A warehouse for a manufacturing establishment that is at a separate physical location will be classified in Warehousing and Storage in NAICS; under SIC, it would have been classified in Manufacturing.

Dealing with breaks in time series. The creation of new sectors and the expansion of the coding system from four to six digits suggest that this revision of the industry classification system is more profound than earlier SIC revisions. Neither of these changes necessarily affects the ability to link old data on a SIC basis to new data on a NAICS basis. Data for more than two-thirds of all four-digit SICs can be derived from the NAICS system, either because the industry is not being changed (other than in code) or because new industries are being defined as subdivisions of old ones.

On the other hand, some industries are being changed more significantly, leading to breaks in the availability of time series data. For example:

- Some wholesale trade establishments in industries such as computer equipment wholesalers and office supply stores are being reclassified as retail trade if they sell mostly through storefront locations.
- SIC 7361, employment agencies, will differ from a similarly titled NAICS category, because executive employment services have been moved into a separate Human Resources Consulting category, and theatrical and movie casting and babysitting bureaus have been included.
- Indian Tribal Councils were included in civic and social organizations. Now the Indian Tribal Councils are identified in public administration. Those establishments owned by Indian Tribal Councils are still coded according to the nature of their economic activity.

Table 2.3.1: Waupaca County Annual Average Employment by Industry, 2001–2002

Waupaca County Annual Average Employment by Industry, 2001–2002			
Sector	2001	2002	Change
Construction	938	972	34
Education and Health	5,057	5,114	57
Financial Activities	604	673	69
Information	962	921	-41
Leisure and Hospitality	2,178	2,252	74
Manufacturing	5,268	5,092	-176
Natural Resources	221	197	-24
Other Services	409	413	4
Professional and Business Services	617	583	-34
Public Administration	628	658	30
Trade, Transportation, and Utilities	3,837	3,844	7

Source: 2001 and 2002 QCEW data, WI Dept. of Workforce Development, http://worknet.wisconsin.gov/worknet/

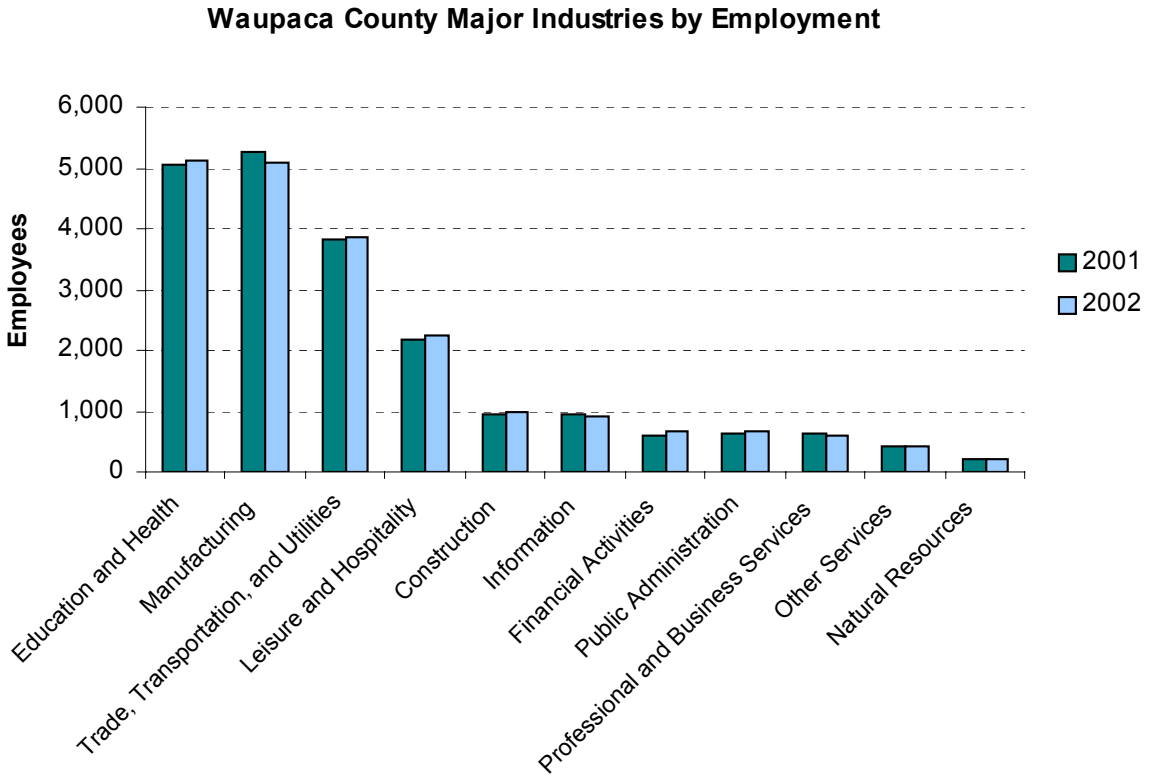
Table 2.3.2: Top 10 Private and Public Employers in Waupaca County, 2003

Top 10 Private and Public Employers in Waupaca County 2003

Rank	Employer	Industry Product or Service	# of Employees
1	Waupaca Foundry, Inc.	Iron Foundries	1,000+
2	Wisconsin Veterans' Home	Nursing Care Facilities	500–999
3	County of Waupaca	Executive & Legislative Offices, Combined	500–999
4	School District of Waupaca	Elementary & Secondary Schools	250–499
5	School District of New London	Elementary & Secondary Schools	250–499
6	Sturm Foods, Inc.	Other Grocery & Related Products Merchant Wholesalers	250–499
7	Krause Publications, Inc.	Periodical Publishers	250–499
8	Reynolds Consumer Products, Inc.	Plastics Bag Manufacturing	250–499
9	Seagrave Fire Apparatus, LLC	Motor Vehicle Body Manufacturing	250–499
10	Clintonville Public Schools	Elementary & Secondary Schools	250–499

Source: 2003 "Top 50 Employers by County," Office of Economic Advisors, WI Dept. of Workforce Development, http://dwd.wisconsin.gov/lmi/topemployers_county.htm

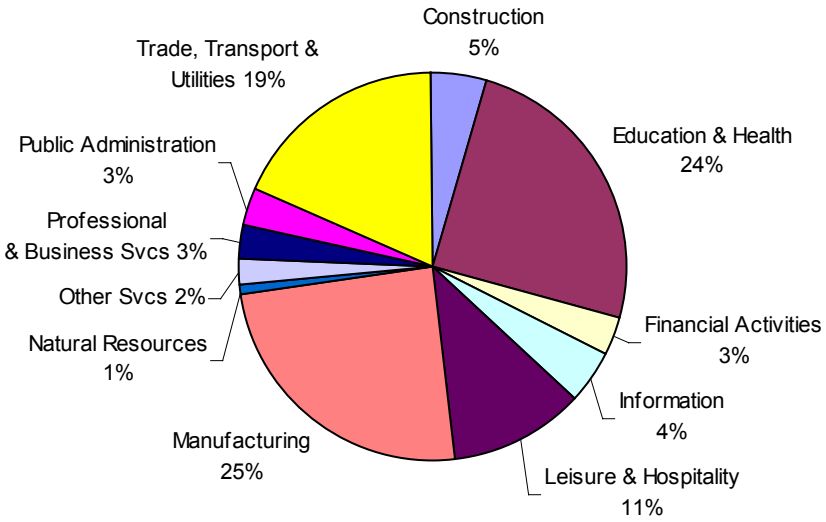
Chart 2.3.1



Source: 2001 and 2002 QCEW data, WI Dept. of Workforce Development, http://worknet.wisconsin.gov/worknet/

Chart 2.3.2

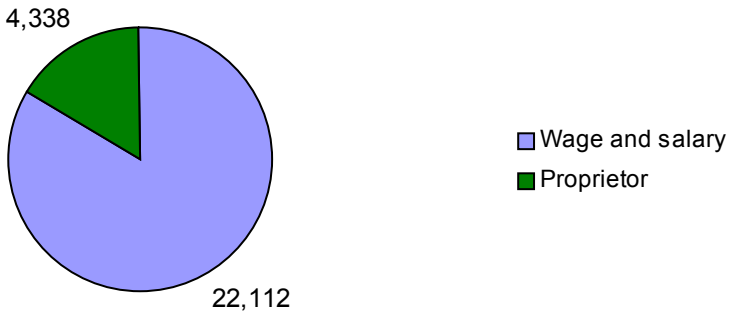
Waupaca County Employment by Industry, 2002



Source: 2001 and 2002 QCEW data, WI Dept. of Workforce Development, http://worknet.wisconsin.gov/worknet/

Chart 2.3.3

Employment by Type for Waupaca County, 2002



Source: 2002 Personal income data, Bureau of Economic Analysis, Table CA05N, http://www.bea.doc.gov/bea/regional/data.htm

Discussion. From Tables 2.3.1 and 2.3.2, and Charts 2.3.1–2.3.3, we see that employment in Waupaca County as of 2002 is concentrated in three industries, which account for 68 percent of all employment in the county: Manufacturing (25%), Education and Health (24%), and Trade, Transportation, and Utilities (19%). Of these top three industries, employment has increased slightly in Education and Health (+57 employees), decreased slightly in Manufacturing (-176 employees), and remained roughly the same in Trade, Transportation, and Utilities (+7 employees) from 2001 to 2002. Across industries, wage

and salary employment far exceeds proprietors' employment; proprietors' employment comprised only 16.4 percent of employment in Waupaca County as of 2002. The county's top ten employers are listed in Table 2.3.2.

Step Four: Total Personal Income (Earnings)

Total personal income is used to measure the size of an economy and answers the questions: What are the most important components of the local economy? Employee earnings are the sum of wages and salaries, other labor income (e.g. benefits), and proprietors' income. Like employment data, earnings data are determined by place of work, not residence. For example, earnings of employees working in one county and residing in another are counted as part of the total personal income in the county where they work. Earnings per worker are simply the total earnings in an industry divided by the total number of employees in that industry.

Table 2.4: Data Sources for Total Personal Income (Earnings)

Data	Regions	Where do I find it?
Composition of total personal income	State and county	Bureau of Economic Analysis http://www.bea.doc.gov/bea/regional/data.htm Tables CA05N (county) and SQ5N (state)
Industries by average annual wage	State and county	Wisconsin Department of Workforce Development, WORKnet Data Tables, QCEW data http://worknet.wisconsin.gov/worknet/

Chart 2.4.1

Kenosha County Components of Personal Income, 2001

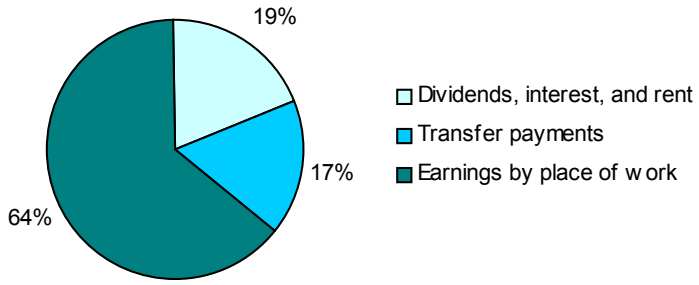
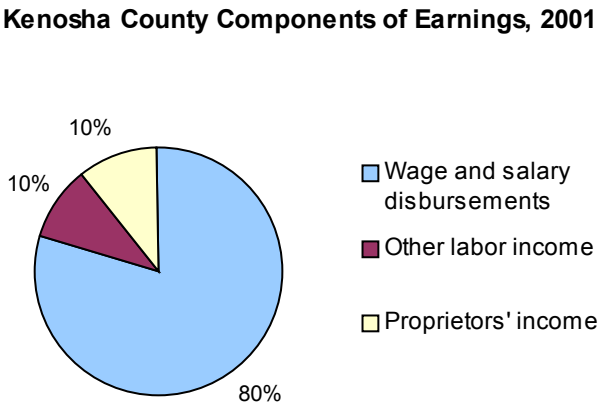


Chart 2.4.2



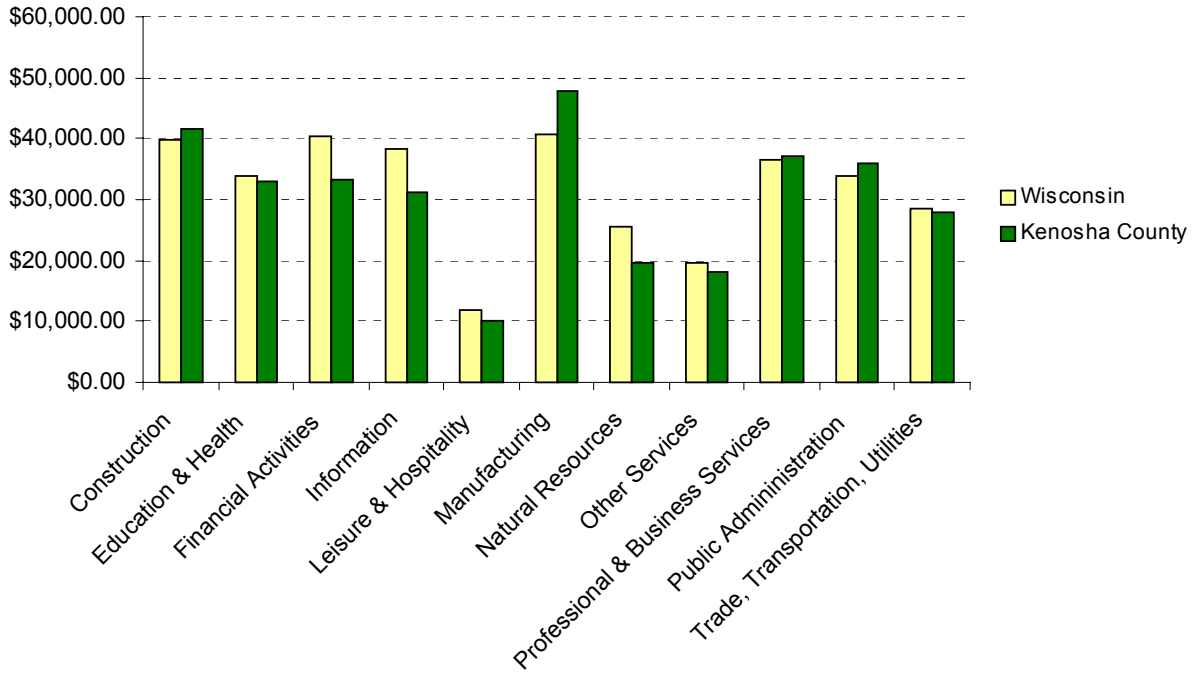
Source for Charts 2.4.1 and 2.4.2: Bureau of Economic Analysis, 2001 personal income data for Kenosha County, Table CA05N, http://www.bea.doc.gov

Table 2.4.1: 2002 Average Annual Wages by Industry, Wisconsin and Kenosha County

Industry sector	Wisconsin	Kenosha County
Construction	$39,667.90	$41,585.00
Education & Health	$33,767.80	$32,911.00
Financial Activities	$40,339.99	$33,192.00
Information	$38,200.82	$31,220.00
Leisure & Hospitality	$11,824.17	$10,051.00
Manufacturing	$40,595.14	$47,874.00
Natural Resources	$25,470.50	$19,608.00
Other Services	$19,503.14	$18,003.00
Professional & Business Services	$36,495.53	$37,184.00
Public Administration	$33,768.43	$36,035.00
Trade, Transportation, Utilities	$28,422.02	$27,819.00

Source: 2002 QCEW data, WI Dept. of Workforce Development, http://worknet.wisconsin.gov/worknet/

Chart 2.4.3: 2002 Average Annual Wages by Industry, Wisconsin and Kenosha



Source: 2002 QCEW data, WI Dept. of Workforce Development, http://worknet.wisconsin.gov/worknet/

Discussion. Total personal income is generally comprised of earnings by place of work; dividends, interest, and rent; and transfer payments. The majority of total personal income in Kenosha County in 2001 came from earnings by place of work (64%) and then from dividends, interest, and rent (19%). Transfer payments equaled the smallest contribution to total personal income (17%). Earnings by place of work are divided into the three following components: wage and salary disbursements (80%); proprietors' income (10%); and other labor income (10%). The three industries in Kenosha County with the highest annual average wages include Manufacturing, Construction, and Professional and Business Servcies. For all three industries, the annual average wage in Kenosha County exceeds the annual average wage for Wisconsin. For the following industries, average wages in Kenosha County lagged behind the wages for Wisconsin overall: Education and Health; Financial Activities; Information; Leisure and Hospitality; Natural Resources; Other Services; and Trade, Transportation, and Utilities.

Step Five: Per Capita Personal Income

Personal income is income people receive from all sources—wages or salary (earned income), transfer payments, and income from interest and investments. Per capita income is the total personal income of residents in a given area divided by the number of residents in that area. Per capita personal income is used as an indicator of the quality of consumer markets in an area, as well as a measure of residents' economic well being.

Table 2.5: Data Sources for Per Capita Personal Income

Data	Where do I find it?
Per capita personal income, current and historic	Bureau of Economic Analysis http://www.bea.doc.gov/bea/regional/data.htm
Per capita personal income, current	Bureau of Economic Analysis http://www.bea.doc.gov/bea/regional/data.htm

Chart 2.5.1

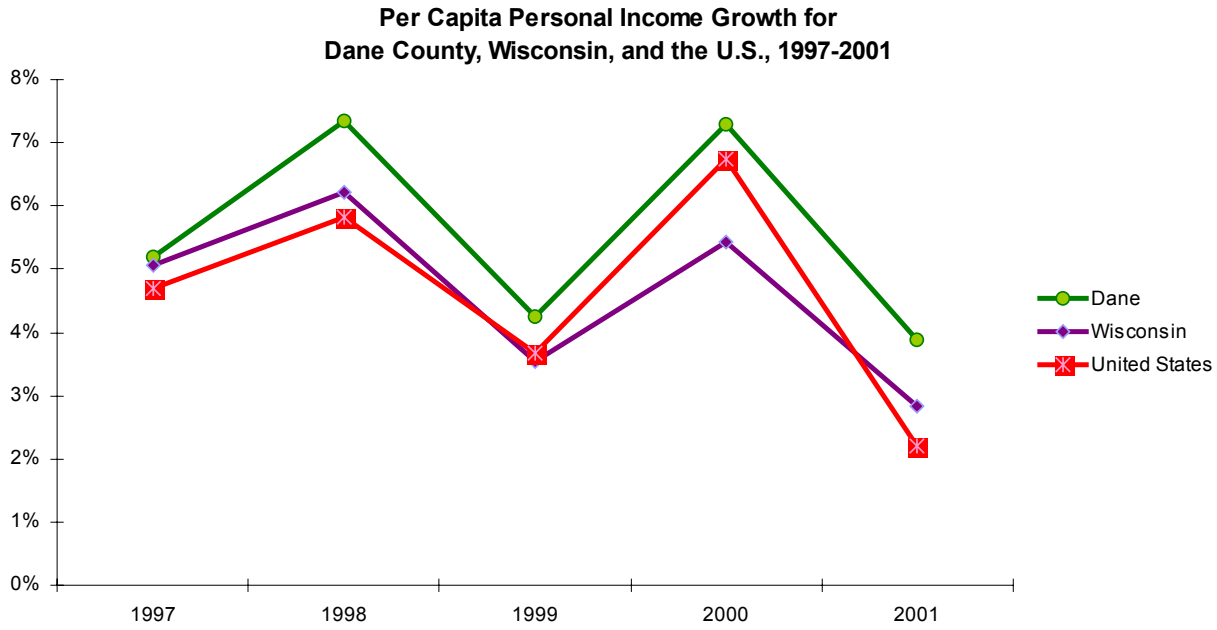
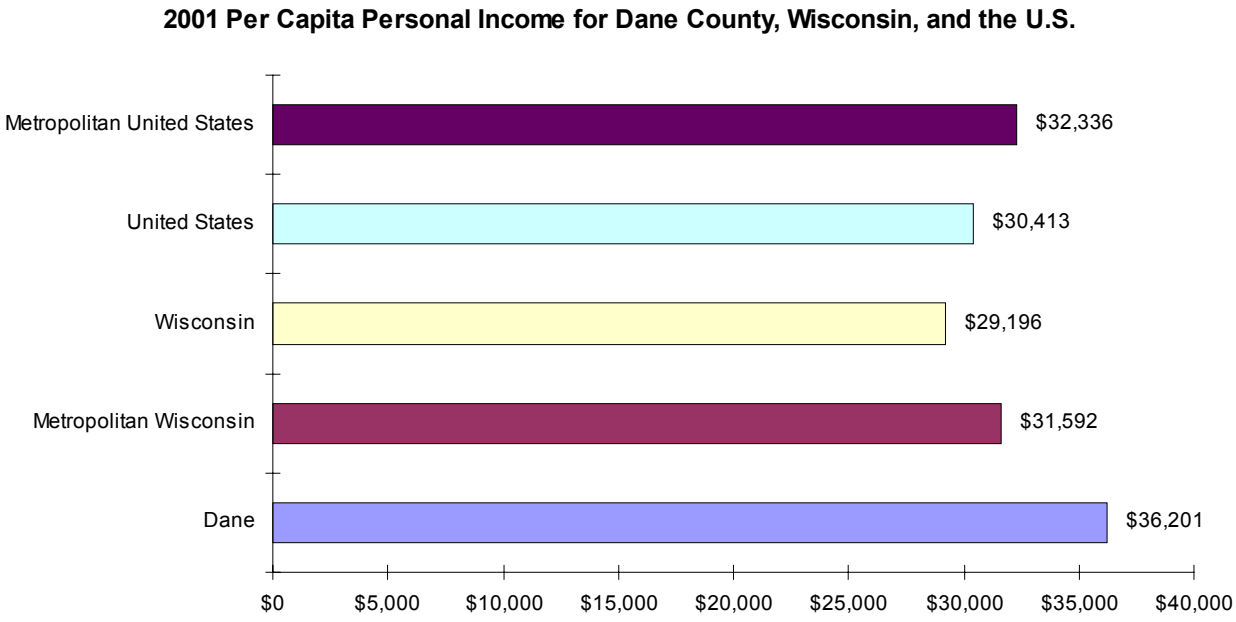


Chart 2.5.2



Source for Charts 2.5.1 and 2.5.2: WI Dept. of Workforce Development, Office of Economic Advisors

Discussion. The per capita personal income (PCPI) for Dane County as of 2001 was well over the PCPI for the United States and Wisconsin, both total and metro. The changes in Dane County's PCPI from 1997 to 2001 have followed the same trend as the state and the nation, peaking in 1998 and 2000.

Step Six: Major Industries and the Economy

Data on the major industry groups are important for identifying what drives economic growth. These data answer the question: What makes the local economy tick?

In steps three and four, industries with the greatest share of employment and the highest average annual wages were identified. Ideally, this process highlighted your industries of interest. For example, you may be interested in supporting industries that have high wages and employment or you may be looking for ways to grow certain industries in your area. The following measurements can tell you more about the industries you've identified for further analysis.

Location quotients. A location quotient (LQ) is a calculated ratio between the local economy and the economy and the same activity within a larger (benchmark) region. This ratio is calculated for all industries to determine whether or not the local economy has a greater share of that industry than expected. In doing so, the quotient helps identify "basic" and "non-basic" industries. If an industry has a greater share than expected of a given industry, then that "extra" industry employment is assumed to be basic because those jobs are above what a local economy should have to serve local needs.

Basic industries, LQ > 1, are ones that draw money into an economy by producing enough stock to sell outside the local economy. Non-basic, LQ < 1, refers to industries that serve the needs of the local economy. In *Community Economic Analysis: A How-to Manual,* authors Hustedde, Shaffer, and Pulver suggest that a location quotient of at least 1.25 is required to consider classifying a local industry as an exporter. Similarly, they recommend that a location quotient of 0.75 or less is needed to categorize an industry as an importing sector.

Location Quotient	Export/Import Status
≤ 0.75	Import Industry
0.76 ≤ LQ ≤ 1.24	Self-Sufficient Industry
≥ 1.25	Export Industry

Identifying local export industries (LQ ≥ 1.25) is useful as it measures the degree of industry specialization within a community. A community with a high location quotient in a specific industry may mean that the local economy has a comparative advantage in that industry. There may be economic development opportunities because of existing economies or synergies that make a community more attractive to businesses in related industries. A location quotient much lower than 1.0 may indicate an import substitution opportunity, meaning the potential to develop local businesses to fill the gap and meet local demand.

To calculate any location quotient the following formula is applied.* Note that this formula compares the regional economy (often a county) to the national economy. Location quotients may also be calculated to compare the county to the state.

$$\text{Location Quotient} = \frac{\text{Regional Employment in Industry } I \text{ in Year } T}{\text{Total Regional Employment Industry } I \text{ in Year } T} \Big/ \frac{\text{National Employment in Industry } I \text{ in Year } T}{\text{Total National Employment Industry } I \text{ in Year } T}$$

You can also look at the change in an industry's location quotient over time to assess if an industry is growing its share of regional employment relative to the nation. This information is particularly useful for targeting industries, either to help them grow or to prevent the regional share from declining further.

Guidelines for analyzing location quotients:

Industries with low and declining location quotients—Relative to the regional average, these industries have a low share of employment. These are the weakest sectors of the industrial base.

Industries with low and increasing location quotients—Though these industries have low concentrations of employment relative to the regional share of employment, they may be important sources of growth and may become leading sectors in the future.

Industries with high and declining location quotients—These industries have high employment concentrations that have been declining over past years. You may want to make special efforts to prevent these industries from losing more of the regional employment share.

Industries with high and increasing location quotients—These industries are the high flyers of the local economy, with high and growing concentrations of employment relative to the regional economy. Economic strategy should focus on maintaining a policy environment that promotes continued high performance in these industries.

Shift-share analysis. The purpose of this analytic technique is to attribute employment change in your sectors of interest to three sources:

National industry growth or decline,

Industry mix, and

Local competitive share.

To perform shift-share analysis, you will need data on:

Regional employment by industry for base year and most recent year

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* Rather than do location quotients by hand, you can use the University of Wisconsin–Extension's location quotient spreadsheet to calculate location quotients for Wisconsin communities for you. Their location quotient calculator can also create comparisons among regions of interest and automatically produces charts and graphs representing your chosen data. To access the UW–Extension's location quotient calculator, visit http://www.uwex.edu/ces/cced/Indicators_Links.htm#location.

National employment by industry for base year and most recent year

National share component

The national share component represents local job growth attributed to the national economy's rate of growth. For example, if the national economy grew by seven percent over that time, we anticipate that the industry's employment also grew by seven percent. To calculate the national share component, you must calculate the following:

National average growth rate = ((Most current total national employment / Total national employment for base year) – 1)

Industry national growth component = (Regional industry's base year employment)*(National average growth rate)

Total regional national growth = Sum of national growth components for each industry

The difference between the employment growth in your industries and the total regional national growth is job growth (or decline) not accounted for by the average national growth rate.

Industry mix component

If employment in a certain industry grew faster than the national average for employment growth, then the industry had favorable growth. If the industry's employment grew at the same rate as the nation's employment on average, then it had neutral growth. Finally, if an industry's employment grows at a slower rate than the national average, then the industry had unfavorable growth.

You will need to calculate an industry's national growth rate and apply it to your base year employment in that industry. By doing so, you will know how many jobs were created in the industry due to a favorable (or unfavorable) growth rate relative to the nation. To calculate the industry mix component, you will need to calculate:

Industry national growth rate = ((Industry's recent year national employment/Industry's base year national employment) – 1)

Industry mix differential = (Industry national growth rate) – (National average growth rate)

Industry mix employment change = (Differential)*(Local industry's base year employment)

Total industry mix component = Sum of industry mix employment change for your industries

Competitiveness component

The final step in shift-share analysis is to calculate the competitiveness component, which measures how each industry's local growth rate differs from the industry's national growth rate. To calculate the competitiveness component, you will need to calculate:

Industry's local growth rate = ((Industry's most recent year local employment/Industry's base year local employment) – 1)

Competitiveness differential = (Industry's local growth rate) – (Industry's national growth rate)

Competitiveness employment change = (Competitiveness differential)*(Local industry's base year employment)

Total competitiveness component = Sum of competitiveness employment change

If the total competitiveness component is positive, then the region gained additional jobs over what was due to the region's industry mix and national growth.

Tools and Resources for Further Analysis

Alliant Energy Midwest Sites

Community Assessment Checklist

This checklist, available at http://www.midwestsites.com/CommunityAssessment.pdf, helps you analyze your community's strengths and weaknesses before developing a plan to improve economic development opportunities in your community.

Laborshed and Labor Survey

Alliant Energy provides support for gathering comprehensive labor survey information for existing customers and new prospects in regional workforce planning. Further information is available at http://www.midwestsites.com/communities/guidelines/workforce.htm.

Econdata.net

The site http://www.econdata.net, operated jointly by Andrew Reamer and Associates and Impresa, provides over 1,000 links to socio-economic data on the Internet. Data links are provided by data type (e.g. employment data) and source (e.g. U.S. Bureau of Labor Statistics).

International Economic Development Council

Site Selection Data Standards for Economic Development Locational Analysis

These data standards provided by the International Economic Development Council contain over 1,200 data elements to gather, organized into 25 spreadsheets. These spreadsheets are available as an Excel file at http://www.iedconline.org/hotlinks/site_selection.html.

Office of Social and Economic Trend Analysis (SETA)

The Office of Social and Economic Trend Analysis (SETA) has a variety of data tools on employment and income, population, public services, retail trade, and county trends for states in the Midwest and Great Plains regions. This Web site, a joint effort among the departments of Economics, Sociology, and Agriculture at Iowa State University, can be accessed at http://www.seta.iastate.edu/.

University of Minnesota Hubert H. Humphrey School of Public Affairs

Understanding Your Industries: Quantitative Section

The shift-share analysis guidelines in this handbook come from this online framework for analyzing local industries created by University of Minnesota's Hubert H. Humphrey Institute for Public Affairs. Visit the following site for more information on industry analysis: http://www.hhh.umn.edu/centers/slp/projects/edweb/uyihom.htm.

University of Wisconsin–Extension, Center for Community Economic Development

Community Indicators

The University of Wisconsin–Extension has an incomparable collection of resources to support community economic analysis and development in Wisconsin. "Community Indicators" include mobility, age cohorts, worker flow data, location quotients, philanthropy and charity, and education and income. See the Web site http://www.uwex.edu/ces/cced/indicate.html, for more information.

Northern EDGE *Best Practice Profiles*

The University of Wisconsin Extension hosts the Northern EDGE (Economic Development and Growing the Economy) project, which facilitates economic development in Wisconsin by funding economic development initiatives, providing market studies, and publishing its *Best Practice Profiles*. These profiles highlight successful economic and workforce development programs underway throughout the state's northern counties. They are intended to serve as a resource for other northern counties as they address similar economic and workforce development issues. You can access these profiles at www.uwex.edu/ces/cced/EDGEProfiles.htm#profiles.

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Glossary of Commonly Used LMI Terms

Adapted from online glossaries for the U.S. Bureau of Labor Statistics and the Wisconsin Department of Workforce Development.

Base period. A point in time used as a reference point for comparison with some later period.

Basic industry. An export industry, or an industry that produces goods and services that are sold to customers outside a region. The export of these goods and serves brings money into an economy and results in a net increase in local income. Basic industries are typically represented by a location quotient greater than one.

Benefits. Non-wage compensation provided to employees such as paid leave (vacations, holidays, sick leave); supplementary pay (premium pay for overtime and work on holidays and weekends, shift differentials, nonproduction bonuses); retirement (defined benefit and defined contribution plans); insurance (life insurance, health benefits, short-term disability, and long-term disability insurance) and legally required benefits (Social Security and Medicare, Federal and State unemployment insurance taxes, and workers' compensation).

Civilian noninstitutional population. Included are persons 16 years of age and older residing in the 50 states and the District of Columbia who are not inmates of institutions (for example, penal and mental facilities, homes for the aged), and who are not on active duty in the armed forces.

Comparative advantage. The ability to produce one good at a lower opportunity cost relative to other goods. Comparative advantage suggests that economies benefit by specialization and exchange. Initially an idea developed to compare national economies, comparative advantage is also important for local economies.

County labor supply area. A region composed of non-MSA counties connected by location, commuting patterns, transportation infrastructure, and similarities in wage rates and employment by industry. Because of its highly rural character, Wisconsin has 11 such regions as of 2004.

Discouraged workers (Current Population Survey). Persons not in the labor force who want and are available for a job and who have looked for work sometime in the past 12 months (or since the end of their last job if they held one within the past 12 months), but who are not currently looking because they believe there are no jobs available or there are none for which they would qualify.

Displaced workers (Current Population Survey). Persons 20 years and over who lost or left jobs because their plant or company closed or moved, there was insufficient work for them to do, or their position or shift was abolished.

Earnings. Pay or wages of a worker or group of workers for services performed during a specific period of time.

Educational attainment. The highest diploma or degree, or level of work towards a diploma or degree, an individual has completed.

Employed persons (Current Population Survey). Persons 16 years and over in the civilian noninstitutional population who, during the reference week, (a) did any work at all (at least 1 hour) as paid employees, worked in their own business, profession, or on their own farm, or worked 15 hours or more as unpaid workers in an enterprise operated by a member of the family, and (b) all those who were not working but who had jobs or businesses from which they were temporarily absent because of vacation, illness, bad weather, childcare problems, maternity or paternity leave, labor-management dispute, job training, or other family or personal reasons, whether or not they were paid for the time off or were seeking other jobs. Each employed person is counted only once, even if he or she holds more than one job. Excluded are persons whose only activity consisted of work around their own house (painting, repairing, or own home housework) or volunteer work for religious, charitable, and other organizations.

Employer. A person or business that employees one or more people for wages or salary; the legal entity responsible for payment of quarterly unemployment insurance taxes or for reimbursing the state fund for unemployment insurance benefits costs in lieu of paying the quarterly taxes.

Establishment. The physical location of a certain economic activity, for example: a factory, store, or office. Generally a single establishment produces a single good or provides a single service. An enterprise (a private firm, government, or non-profit organization) could consist of a single establishment or multiple establishments. A multi-establishment enterprise could have all its establishments in one industry (i.e., a chain), or could have various establishments in different industries (i.e., a conglomerate).

Full-time employees (Current Population Survey). Employees who usually work more than 35 hours per week (at all jobs within an establishment) regardless of the number of hours worked in the reference week.

Industry. A group of establishments that produce similar products or provide similar services. For example, all establishments that manufacture automobiles are in the same industry. A given industry, or even a particular establishment in that industry, might have employees in dozens of occupations. The North American Industry Classification System (NAICS) groups similar establishments into industries.

Labor force (Current Population Survey). The labor force includes all persons classified as employed or unemployed.

Labor force participation rate. The labor force as a percent of the civilian noninstitutional population.

Location quotient. A location quotient is an index used to compare industry share in a local economy to some reference (usually national) economy, calculated as a ratio of the local economy to the reference economy.

Mean wage. An average wage. A mean wage estimate by industry is calculated by summing the wages of all the employees in a given industry and then dividing the total wages by the number of employees.

Median wage. An occupational median wage estimate is the boundary between the highest paid 50 percent and the lowest paid 50 percent of workers in that occupation.

Half of the workers in a given occupation earn more than the median wage, and half the workers earn less than the median wage.

Metropolitan Statistical Areas (MSAs). The general concept of an MSA and an SMSA is one of a large population nucleus, together with adjacent communities that have a high degree of economic and social integration with that nucleus. These are defined by the Office of Management and Budget as a standard for federal agencies in the preparation and publication of statistics relating to metropolitan areas.

Non-basic industry. An industry that produces goods and services that are consumed locally. Because these industries do not export their goods and services outside their region, they do not provide a net addition to the local economy. Non-basic industries are typically represented by a location quotient less than one.

North American Industry Classification System (NAICS). The successor to the SIC system; this system of classifying business establishments is used by the United States, Canada, and Mexico.

Not in the labor force (Current Population Survey). Includes persons 16 years and over in the civilian noninstitutional population who are neither employed nor looking for work.

Not seasonally adjusted. This term is used to describe data series not subject to the seasonal adjustment process. In other words, the effects of regular, or seasonal, patterns have not been removed from these series.

Occupation. A set of activities or tasks that employees are paid to perform. Employees that perform essentially the same tasks are in the same occupation, whether or not they are in the same industry. Some occupations are concentrated in a few particular industries, other occupations are found in the majority of industries.

Occupational Employment Statistics (OES). The Occupational Employment Statistics program is a program of the federal Bureau of Labor Statistics that collects data on wage and salary workers in nonfarm establishments in order to produce employment and wage estimates by occupation. OES covers all full-time and part-time wage and salary workers in nonfarm industries. It does not cover the self-employed, owners and partners in unincorporated firms, household workers, or unpaid family workers.

Occupational education and training requirements categories. Occupations are classified into 1 of 11 categories that describe the education or training needed by most workers to become fully qualified. The categories are: first professional degree, doctoral degree, master's degree, work experience in an occupation requiring a bachelor's or higher degree, bachelor's degree, associate degree, postsecondary vocational training, work experience in a related occupation, long-term on-the-job training, moderate-term on-the-job training, and short-term on-the-job training.

Occupational groups. Defined occupations selected for study classified in one of the following groups: Professional, technical, and related; clerical and sales; and blue-collar and service.

O*NET. The Occupational Information Network, a comprehensive database of worker attributes and job characteristics. Though O*NET does not use the same coding for

occupations as the Standard Occupational Classification (SOC) system, "O*NET Online" provides a crosswalk between O*NET and SOC classifications.

Part-time employees (Current Population Survey). Employees who usually work between 1 and 34 hours per week (at all jobs within an establishment) regardless of the number of hours worked in the reference week.

Percentile wage estimate. Shows what percentage of workers in an occupation earns less than a given wage and what percentage earns more. For example, a 25th percentile wage of $15.00 per hour indicates that 25 percent of workers (in a given occupation in a given area) earn less than $15.00 per hour; therefore 75 percent of workers earn more than $15.00 per hour.

Per capita personal income. Total personal income in a region divided by number of residents.

Personal income. Income received by persons from all sources. It is the sum of compensation of employees, proprietors' income, rental income, income receipts on assets, and current transfer receipts minus contributions for government social insurance.

Seasonally adjusted. Seasonal adjustment removes the effects of events that follow a more or less regular pattern each year. These adjustments make it easier to observe the cyclical and other non-seasonal movements in a data series.

Self-employed persons (Current Population Survey). Include those who worked in their own business, profession, or on their own farm. Since 1967, published data exclude those who operate their own incorporated business or farm. Estimates for such workers are published separately.

Shift-share analysis. Shift-share analysis is a way to analyze economic growth by separating it into three components: national growth, industrial mix, and regional competitiveness.

Standard Industrial Classification (SIC) system. The SIC system is used throughout the federal government to group establishments into industries. The SIC division structure makes it possible to collect and calculate establishment data by broad industrial divisions (labeled A through K), industrial groups (the 2-and 3-digit SIC levels), and specific industries (the 4-digit level).

Standard Occupational Classification (SOC) system. This system will be used by all federal statistical agencies to classify workers into occupational categories for the purpose of collecting, calculating, or disseminating data. All workers are classified into 1 of over 820 occupations according to their occupational definition. To facilitate classification, occupations are combined to form 23 major groups, 96 minor groups, and 449 broad occupations. Each broad occupation includes detailed occupation(s) requiring similar job duties, skills, education, or experience.

Turnover. Separation of an employee from an establishment (voluntary, involuntary, or other).

Turnover rate. The number of total separations during the month divided by the number of employees who worked during or received pay for the pay period that

includes the 12th of the month (monthly turnover); the number of total separations for the year divided by average monthly employment for the year (annual turnover).

Unemployed persons. Persons 16 years and over who had no employment during the reference week, were available for work, except for temporary illness, and had made specific efforts to find employment sometime during the 4-week period ending with the reference week. Persons who were waiting to be recalled to a job from which they had been laid off need not have been looking for work to be classified as unemployed.

Unemployment rate. The unemployment rate represents the number unemployed as a percent of the labor force.

Wage and salary workers. Workers who receive wages, salaries, commissions, tips, payment in kind, or piece rates. The group includes employees in both the private and public sectors.

Wages and salaries. Hourly straight-time wage rate or, for workers not paid on an hourly basis, straight-time earnings divided by the corresponding hours. Straight-time wage and salary rates are total earnings before payroll deductions, excluding premium pay for overtime and for work on weekends and holidays, shift differentials, and nonproduction bonuses such as lump-sum payments provided in lieu of wage increases (Also see Earnings).

Workforce Development Area (WDA). Wisconsin administrative unit composed of multiple counties. Each of the 11 WDAs has a labor market analyst/economist who monitors economic developments within those counties, and serves as a resource for the region's labor market information.

Appendix of Data Sources

	Demographic data, U.S. Census	**County Business Patterns** (CBP)	**Economic Census**	**Current Population Survey** (CPS)	**Current Employment Survey** (CES)	**Quarterly Census of Employment & Wages** (QCEW)	**Local Area Unemployment Statistics** (LAUS)
Description	Demographic data about population, income, housing, and employment by geographic region (place of residence)	Data on total number of establishments, payroll (1st quarter and annual), employment, and employment size	Detailed data on total number of establishments, employment, labor costs, and measures of output. Data on expenses, assets, and capital expenditures also available at some geographic levels	Provides monthly statistics on employment, unemployment, and related measures	Employment, average production worker wages, and average weekly hours by industry and geographic area	Employment, number of employers, average weekly wage, total wages, quarterly and annual average wage by industry and geographic area	Employed and unemployed persons by geographic area (place of residence)
Sample	Universe of all individuals	Universe of all businesses, excepting self-employed persons; employees of private households; and railroad, agricultural, and most government employees	Universe of all businesses	Sample of civilian non-institutional population of 16+ years from 60,000 households	Survey of a sample of employers	Census of all employers liable for Unemployment Insurance (UI); 97–99% of total non-agricultural employment	Estimation based on CES and Unemployment Insurance claims
Frequency/ Time Lag	Updated every 10 years, with data available 2–4 years later	Updated annually, with data available 2–3 years later	Updated every 5 years (years ending in "2" and "7"), with data available 2 years later	Monthly data, available by the 3rd week of the following month	Monthly data, available by the 3rd week of the following month	Quarterly data available 6 months after the close of the quarter	Monthly data, available by the third week of the following month
Geography	Nation, states, counties, cities, and census tracts	Nation, states, counties, MSAs, zip codes	Nation, states, counties, MSAs, zip codes	Nation, 11 states	Nation, states, counties, and MSAs	Nation, states, counties, and MSAs	Nation, states, counties, and MSAs
Used for …	Population estimates/projections; commuting patterns	Employment by industry Average wages	Employment by industry Average wages		Employment by industry and occupation	Employment by industry Average wages	Unemployment rate

	Demographic data, U.S. Census	**County Business Patterns** (CBP)	**Economic Census**	**Current Population Survey** (CPS)	**Current Employment Survey** (CES)	**Quarterly Census of Employment & Wages** (QCEW)	**Local Area Unemployment Statistics** (LAUS)
Advantages	Complete universe of individuals and precise level of geographic detail	Complete universe of businesses, precise level of geographic and industry detail	Complete universe of businesses, precise level of geographic and industry detail	Current household data	Current employment data	Complete universe of employers, precise geographic and industry detail	
Limitations	Updated only every 10 years	Data delayed 2–3 years	Data delayed 2 years	Uses sample, not total population; also has restricted geographic coverage	Uses sample, not total population	6 month time lag and some data confidentiality	Annual revisions and limited demographic detail
Where to find …	Census Web page www.census.gov; or American FactFinder factfinder.census.gov WI DOA Web page www.doa.state.wi.us/pagesubtext_detail.asp?linksubcatid=353	Census Web page, County Business Patterns home page www.census.gov/epcd/cbp/view/cbpview.html	Census Web page, Economic Census www.census.gov/econ/census02 American FactFinder factfinder.census.gov	Bureau of Labor Statistics www.bls.census.gov/cps/cpsmain.htm	Bureau of Labor Statistics www.bls.gov/ces/home.htm WORKnet worknet.wisconsin.gov/worknet/	Bureau of Labor Statistics www.bls.gov/cew/home.htm WORKnet worknet.wisconsin.gov/worknet/	Bureau of Labor Statistics www.bls.gov/lau/home.htm WORKnet worknet.wisconsin.gov/worknet/

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